AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. - 70. (canceled).

71. (currently amended): An information-providing method for providing information online from an information-providing server in response to a request from a client which has an image-forming apparatus to which a cartridge is replaceably attached, the cartridge having a memory element storing an ID of the cartridge and a URL of the information-providing server, the method comprising the steps of:

reading the cartridge ID and the URL from the memory element of the cartridge at the client;

accessing the information-providing server from the client by using the read URL;

transmitting the read cartridge ID from the client to the information-providing server;

transmitting a web page according to the transmitted cartridge ID, from the server to the client, the web page containing a plurality of thumbnail images corresponding to a plurality of sample printing data;

reading printing environment information from a storage of the image-forming apparatus at the client;

transmitting the read printing information from the client to the information-providing server;

displaying the transmitted web page at the client;

inputting into the client a user's selection of one of the thumbnail images displayed on the web page;

displaying a set of printer properties and printing medium appropriate on the basis of the transmitted printing environment information and the selected thumbnail image at the client;

selecting a printing mode and a printing medium desired by a user based on the displayed set of printer properties and the displayed printing medium at the client;

creating printing data on the basis of the selected printing mode and the selected printing medium at the server;

transmitting the printing data, which is to be supplied to the image-forming apparatus, from the server to the client;

supplying the printing data received from the information-providing server, to the image-forming apparatus from the client; and

processing the printing data received from the information-providing server via the client to perform printing,

wherein the image forming apparatus is locally connected to the client,

wherein the printing data supplied from the client to the image forming apparatus is different from the plurality of thumbnail images.

72. (previously presented): The information-providing method according to claim 71, wherein the information-providing server has the web page corresponding to the cartridge ID, the method further comprising:

automatically accessing the web page corresponding to the cartridge ID which is in the memory element of the cartridge and has been read by the image-forming apparatus.

73. (previously presented): The information-providing method according to claim 71, wherein a password for permitting access to the information-providing server by the client are stored in the memory element, the method further comprising:

reading the password from the memory element of the cartridge at the client, and

transmitting the password inside the memory element of the cartridge, which has been read by the image-forming apparatus, to the server in response to an inquiry sent from the information-providing server, thereby connecting to the server.

74. (previously presented): The information-providing method according to claim 73, wherein a range of permitting the access in the information-providing server is set to a range which is different depending on the password.

75. (canceled).

76. (currently amended): A system for providing information online from an information-providing server in response to a request from a client which has an image-forming apparatus to which a cartridge is replaceably attached, the cartridge having a memory element storing an ID of the cartridge and a URL of the information-providing server, the system comprising:

the client configured to read the cartridge ID and the URL from the memory element of the cartridge;

the client further configured to access the information-providing server by using the read URL;

the client further configured to transmit the read cartridge ID to the information-providing

server;

the information-providing server configured to transmit a web page according to the

transmitted cartridge ID, the web page containing a plurality of thumbnail images corresponding

to a plurality of sample printing data;

the client further configured to read printing environment information from a storage of

the image-forming apparatus;

the client further configured to transmit the printing environment information to the

information-providing server;

the client further configured to display the transmitted web page;

the client further configured to acquire a user's selection of one of the thumbnail images

displayed on the web page;

the client further configured to display a set of printer properties and printing medium

appropriate on the basis of the transmitted printing environment information and the selected

thumbnail image;

the client further configured to acquire a printing mode and a printing medium desired by

a user based on the displayed set of printer properties and the displayed printing medium;

the information-providing server further configured to create printing data on the basis of

the selected printing mode and the selected printing medium;

the information-providing server further configured to transmit the printing data, which is

to be supplied to the client;

the client further configured to supply the printing data received from the information-

providing server to the image-forming apparatus; and

the image-forming apparatus configured to process the printing data received from the
information-providing server via the client to perform printing,

wherein the image forming apparatus is locally connected to the client,

wherein the printing data supplied from the client to the image forming apparatus is
different from the plurality of thumbnail images.

77. (canceled).

78. (currently amended): A computer program product for providing information online
from an information-providing server in response to a request from a client which has an image-
forming apparatus to which a cartridge is replaceably attached, the cartridge having a memory
element storing an ID of the cartridge and a URL of the information-providing server, the
computer program product comprising:

a computer readable memory storing program codes for causing the client to read the
cartridge ID and the URL from the memory element in the cartridge;

a computer readable memory storing program codes for causing the client to access the
information-providing server by using the read URL;

a computer readable memory storing program codes for causing the client to transmit the
cartridge ID to the information-providing server;

a computer readable memory storing program codes for causing the information-
providing server to transmit a web page according to the transmitted cartridge ID, to the client,
the web page containing a plurality of thumbnail images corresponding to a plurality of sample
printing data;

a computer readable memory storing program codes for causing the client to read printing environment information from a storage of the image-forming apparatus;

a computer readable memory storing program codes for causing the client to transmit the printing environment information to the information-providing server;

a computer readable memory storing program codes for causing the client to display the transmitted web page;

a computer readable memory storing program codes for causing the client to acquire a user's selection of one of thumbnail images displayed on the web page;

a computer readable memory storing program codes for causing the client to display a set of printer properties and printing medium appropriate on the basis of the transmitted printing environment information and the selected thumbnail image;

a computer readable memory storing program codes for causing the client to acquire a printing mode and a printing medium desired by a user based on the displayed set of printer properties and the displayed printer medium;

a computer readable memory storing program codes for causing the information-providing server to create printing data on the basis of the selected printing mode and the selected printing medium;

a computer readable memory storing program codes for causing the information-providing server to transmit the printing data, which is to be supplied to the image-forming apparatus;

a computer readable memory storing program codes for causing the client to supply the printing data received from the information-providing server to the image-forming apparatus; and

a computer readable memory storing program codes for causing the image-forming apparatus to process the printing data received from the information-providing server via the client to perform printing,

wherein the image forming apparatus is locally connected to the client,

wherein the printing data supplied from the client to the image forming apparatus is different from the plurality of thumbnail images.

79. - 82. (canceled).

83. (withdrawn): A system which uses a host apparatus and image-forming apparatus that are connected to each other and a server to which the host apparatus is communicably connected, comprising:

a replaceable cartridge with a memory element is attached to the image-forming apparatus;

first information including a URL for the server and a cartridge type are stored in the memory element of the cartridge;

the image-forming apparatus comprises a first memory region for storing second information in connection with a printer firmware and a first list of types of cartridges suitable for use, a reading component for reading the first information from the memory element of the cartridge, a first determining component for determining whether the cartridge type in the first information is contained in the first list, a first transmitting component for reading the second information from the first memory region and transmitting the first information and the second

information to the host apparatus if it is determined that the cartridge type is not in the first list;

and

the host apparatus comprises a receiving component for receiving the first information

and the second information, a second memory region for storing third information in connection

with a type of printer driver in regard to driving the image-forming apparatus, a second

determining component for determining whether an update of the printer firmware is necessary

based on the cartridge type in the first information and the second information, a third

determining component for determining whether an update of the printer driver is necessary

based on the cartridge type in the first information and the third information if as a result of

processing to determine whether updating of the printer firmware is necessary it is found that an

update of the printer firmware is not necessary, a fourth determining component for determining

whether an update of only printer firmware is necessary or whether an update of the printer

driver and the printer firmware is necessary based on the cartridge type in the first information

and the third information if as a result of processing to determine whether the update of the

printer firmware is necessary it is found that the update of the printer firmware is necessary, an

access component for accessing the server indicated by the URL by using the URL and

transmitting printing environment information including at least one of the second information

and the third information to the server if as a result processing to determine whether updating is

necessary it is found that an update of at least one of the printer firmware and printer driver is

necessary, and

the server comprises a third memory region for storing a second list of types of cartridges

suitable for use, a fifth determining component for determining whether updating of at least one

of the printer driver and printer firmware is necessary based on the printing environment

information and the second list, a second transmitting component for transmitting the second list

to the host apparatus if as a result processing to determine whether the updating is necessary it is

found that the update of the printer driver and printer firmware is not necessary.

       84. (withdrawn): A method for determining whether updates are required, the method

comprising the steps of:

       attaching a replaceable cartridge with a memory element to an image-forming apparatus;

       storing first information including a URL for a server and a cartridge type in the memory

element of the cartridge;

       storing second information in connection with a printer firmware and a first list of types

of cartridges suitable for use in a first memory region;

       storing third information in connection with a type of printer driver in regard to driving

the image-forming apparatus in a second memory regions of a host apparatus;

       storing a second list of types of cartridges suitable for use in a third memory region of the

server;

       reading the first information from the memory element of the cartridge;

       determining whether the cartridge type in the first information is contained in the first

list;

       reading the second information from the first memory region;

       transmitting the first information and the second information to the host apparatus when

the cartridge type is not in the list;

       receiving the first information and the second information;

determining whether an update of the printer firmware is necessary based on the cartridge type in the first information and the second information;

determining whether an update of the printer driver is necessary based on the cartridge type in the first information and the third information when it is found that the update of the printer firmware is not necessary

determining whether an update of only printer firmware is necessary or whether an update of the printer driver and the printer firmware is necessary based on the cartridge type in the first information and the third information when it is found that the update of the printer firmware is necessary;

accessing the server indicated by the URL by using the URL when it is found that update of at least one of the printer firmware and printer driver is necessary;

transmitting printing environment information including at least one of the second information and the third information to the server when it is found that update of at least one of the printer firmware and printer driver is necessary;

determining whether an update of at least one of the printer driver and printer firmware is necessary based on the printing environment information and the second list; and

transmitting the second list to the host apparatus when it is found that update of the printer driver and printer firmware is not necessary.